## PE 17 2004 00

## SEQUENCE LISTING

<110> Murphy, Christopher J. McAnulty, Jonathan F. Reid, Ted W. <120> Transplant Media <130> TPLANT-06468 <140> 09/917,340 <141> 2001-07-29 <150> 60/221,632 <151> 2000-07-28 <150> 60/249,602 <151> 2000-11-17 <150> 60/290,932 <151> 2001-05-15 <160> 96 <170> PatentIn Ver. 2.0 <210> 1 <211> 64 <212> PRT <213> Bos taurus <400> 1 Met Arg Leu His His Leu Leu Leu Ala Leu Leu Phe Leu Val Leu Ser Ala Gly Ser Gly Phe Thr Gln Gly Val Arg Asn Ser Gln Ser Cys Arg Arg Asn Lys Gly Ile Cys Val Pro Ile Arg Cys Pro Gly Ser Met Arg Gln Ile Gly Thr Cys Leu Gly Ala Gln Val Lys Cys Cys Arg Arg Lys

<210> 2

<211> 24

<212> PRT

<213> Xenopus laevis

<400> 2

Gly Val Leu Ser Asn Val Ile Gly Tyr Leu Lys Lys Leu Gly Thr Gly

1 5 10 15

Ala Leu Asn Ala Val Leu Lys Gln

<210> 3

<211> 81

<212> PRT

<213> Xenopus laevis

<400> 3

Met Tyr Lys Gly Ile Phe Leu Cys Val Leu Leu Ala Val Ile Cys Ala 1 5 15

Asn Ser Leu Ala Thr Pro Ser Ser Asp Ala Asp Glu Asp Asn Asp Glu 20 25 30

Val Glu Arg Tyr Val Arg Gly Trp Ala Ser Lys Ile Gly Gln Thr Leu
35 40 45

Gly Lys Ile Ala Lys Val Gly Leu Lys Glu Leu Ile Gln Pro Lys Arg
50 60

Glu Ala Met Leu Arg Ser Ala Glu Ala Gln Gly Lys Arg Pro Trp Ile 65 70 75 80

Leu

<210> 4

<211> 303

<212> PRT

<213> Xenopus laevis

<400> 4

Met Phe Lys Gly Leu Phe Ile Cys Ser Leu Ile Ala Val Ile Cys Ala 1 5 10 15

Asn Ala Leu Pro Gln Pro Glu Ala Ser Ala Asp Glu Asp Met Asp Glu 20 25 30

Arg Glu Val Arg Gly Ile Gly Lys Phe Leu His Ser Ala Gly Lys Phe 35 40 45

Gly Lys Ala Phe Val Gly Glu Ile Met Lys Ser Lys Arg Asp Ala Glu 50 60

Ala Val Gly Pro Glu Ala Phe Ala Asp Glu Asp Leu Asp Glu Arg Glu 65 70 75 80

Val Arg Gly Ile Gly Lys Phe Leu His Ser Ala Lys Lys Phe Gly Lys 85 90 95

Ala Phe Val Gly Glu Ile Met Asn Ser Lys Arg Asp Ala Glu Ala Val

Gly Pro Glu Ala Phe Ala Asp Glu Asp Leu Asp Glu Arg Glu Val Arg 115 120 125

Gly Ile Gly Lys Phe Leu His Ser Ala Lys Lys Phe Gly Lys Ala Phe 130 135 140

Val Gly Glu Ile Met Asn Ser Lys Arg Asp Ala Glu Ala Val Gly Pro 145 150 155

Glu Ala Phe Ala Asp Glu Asp Leu Asp Glu Arg Glu Val Arg Gly Ile 165 170 175

Gly Lys Phe Leu His Ser Ala Lys Lys Phe Gly Lys Ala Phe Val Gly Glu Ile Met Asn Ser Lys Arg Asp Ala Glu Ala Val Gly Pro Glu Ala Phe Ala Asp Glu Asp Phe Asp Glu Arg Glu Val Arg Gly Ile Gly Lys Phe Leu His Ser Ala Lys Lys Phe Gly Lys Ala Phe Val Gly Glu Ile Met Asn Ser Lys Arg Asp Ala Glu Ala Val Gly Pro Glu Ala Phe Ala Asp Glu Asp Leu Asp Glu Arg Glu Val Arg Gly Ile Gly Lys Phe Leu His Ser Ala Lys Lys Phe Gly Lys Ala Phe Val Gly Glu Ile Met Asn Ser Lys Arg Asp Ala Glu Ala Val Asp Asp Arg Arg Trp Val Glu <210> 5 <211> 17 <212> PRT <213> Tachypleus gigas <400> 5 Lys Trp Cys Phe Arg Val Cys Tyr Arg Gly Ile Cys Tyr Arg Arg Cys Arg <210> 6 <211> 17 <212> PRT <213> Tachypleus gigas Arg Trp Cys Phe Arg Val Cys Tyr Arg Gly Ile Cys Tyr Arg Lys Cys Arg <210> 7 <211> 129 <212> PRT <213> Bufo gargarizans <400> 7 Met Ser Gly Arg Gly Lys Gln Gly Gly Lys Val Arg Ala Lys Ala Lys Thr Arg Ser Ser Arg Ala Gly Leu Gln Phe Pro Val Gly Arg Val His Arg Leu Leu Arg Lys Gly Asn Tyr Ala Gln Arg Val Gly Ala Gly Ala

40

Pro Val Tyr Leu Ala Ala Val Leu Glu Tyr Leu Thr Ala Glu Ile Leu Glu Leu Ala Gly Asn Ala Ala Arg Asp Asn Lys Lys Thr Arg Ile Ile Pro Arg His Leu Gln Leu Ala Val Arg Asn Asp Glu Glu Leu Asn Lys Leu Leu Gly Gly Val Thr Ile Ala Gln Gly Gly Val Leu Pro Asn Ile 105 Gln Ala Val Leu Leu Pro Lys Thr Glu Ser Ser Lys Pro Ala Lys Ser Lys <210> 8 <211> 21 <212> PRT <213> Bufo gargarizans <400> 8 Thr Arg Ser Ser Arg Ala Gly Leu Gln Phe Pro Val Gly Arg Val His Arg Leu Leu Arg Lys 20 <210> 9 <211> 63 <212> PRT <213> Bombyx mori <400> 9 Met Asn Phe Val Arg Ile Leu Ser Phe Val Phe Ala Leu Val Leu Ala Leu Gly Ala Val Ser Ala Ala Pro Glu Pro Arg Trp Lys Leu Phe Lys Lys Ile Glu Lys Val Gly Arg Asn Val Arg Asp Gly Leu Ile Lys Ala Gly Pro Ala Ile Ala Val Ile Gly Gln Ala Lys Ser Leu Gly Lys

<210> 10

<211> 63

<212> PRT

<213> Bombyx mori

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Met Asn Phe Ala Lys Ile Leu Ser Phe Val Phe Ala Leu Val Leu Ala
Leu Ser Met Thr Ser Ala Ala Pro Glu Pro Arg Trp Lys Ile Phe Lys
Lys Ile Glu Lys Met Gly Arg Asn Ile Arg Asp Gly Ile Val Lys Ala
Gly Pro Ala Ile Glu Val Leu Gly Ser Ala Lys Ala Ile Gly Lys
<210> 11
<211> 63
<212> PRT
<213> Drosophila melanogaster
<400> 11
Met Asn Phe Tyr Lys Ile Phe Val Phe Val Ala Leu Ile Leu Ala Ile
Ser Ile Gly Gln Ser Glu Ala Gly Trp Leu Lys Lys Leu Gly Lys Arg
Ile Glu Arg Ile Gly Gln His Thr Arg Asp Ala Thr Ile Gln Gly Leu
Gly Ile Ala Gln Gln Ala Ala Asn Val Ala Ala Thr Ala Arg Gly
                         55
<210> 12
<211> 31
<212> PRT
<213> Sus scrofa
<400> 12
Ser Trp Leu Ser Lys Thr Ala Lys Lys Leu Glu Asn Ser Ala Lys Lys
Arg Ile Ser Glu Gly Ile Ala Ile Ala Ile Gln Gly Gly Pro Arg
                                 25
<210> 13
<211> 13
<212> PRT
<213> Bos taurus
<400> 13
Ile Leu Pro Trp Lys Trp Pro Trp Pro Trp Arg Arg
<210> 14
<211> 34
<212> PRT
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<213> Lactococcus lactis

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<400> 14
Ile Thr Ser Ile Ser Leu Cys Thr Pro Gly Cys Lys Thr Gly Ala Leu
Met Gly Cys Asn Met Lys Thr Ala Thr Cys His Cys Ser Ile His Val
Ser Lys
<210> 15
<211> 20
<212> PRT
<213> Rana catesbeiana
<400> 15
Phe Leu Gly Gly Leu Ile Lys Ile Val Pro Ala Met Ile Cys Ala Val
Thr Lys Lys Cys
<210> 16
<211> 25
<212> PRT
<213> Bos taurus
<400> 16
Phe Lys Cys Arg Arg Trp Gln Trp Arg Met Lys Lys Leu Gly Ala Pro
Ser Ile Thr Cys Val Arg Arg Ala Phe
<210> 17
<211> 19
<212> PRT
<213> Sus scrofa
<220>
<221> SITE
<222> (19)
<223> Xaa at this position can be any amino acid.
<400> 17
Arg Gly Gly Arg Leu Cys Tyr Cys Arg Arg Phe Cys Val Cys Val
Gly Arg Xaa
<210> 18
<211> 16
<212> PRT
<213> Sus scrofa
<400> 18
Gly Gly Arg Leu Cys Tyr Cys Arg Arg Phe Cys Ile Cys Val Gly
                  5
                                     10
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<210> 19

<211> 51

<212> PRT

<213> Homo sapiens

<400> 19

Met Lys Phe Phe Val Phe Ala Leu Ile Leu Ala Leu Met Leu Ser Met  $1 \hspace{1.5cm} 5 \hspace{1.5cm} 10 \hspace{1.5cm} 15$ 

Thr Gly Ala Asp Ser His Ala Lys Arg His His Gly Tyr Lys Arg Lys
20 25 30

Phe His Glu Lys His His Ser His Arg Gly Tyr Arg Ser Asn Tyr Leu 35 40 45

Tyr Asp Asn 50

<210> 20

<211> 38

<212> PRT

<213> Macaca fascicularis

<400> 20

Asp Ser His Glu Glu Arg His His Gly Arg His Gly His His Lys Tyr 1 5 10 15

Gly Arg Lys Phe His Glu Lys His His Ser His Arg Gly Tyr Arg Ser 20 25 30

Asn Tyr Leu Tyr Asp Asn 35

<210> 21

<211> 33

<212> PRT

<213> Phyllomedusa sauvagei

<400> 21

Ala Leu Trp Lys Thr Met Leu Lys Lys Leu Gly Thr Met Ala Leu His 1 5 10 15

Ala Gly Lys Ala Ala Leu Gly Ala Ala Ala Asp Thr Ile Ser Gln Thr
20 25 30

Gln

<210> 22

<211> 34

<212> PRT

<213> Phyllomedusa sauvagei

<400> 22

Ala Leu Trp Phe Thr Met Leu Lys Lys Leu Gly Thr Met Ala Leu His
1 5 10 15

Ala Gly Lys Ala Ala Leu Gly Ala Ala Ala Asn Thr Ile Ser Gln Gly
20 25 30

Thr Gln

```
<210> 23
<211> 30
<212> PRT
<213> Phyllomedusa sauvagei
<400> 23
Ala Leu Trp Lys Asn Met Leu Lys Gly Ile Gly Lys Leu Ala Gly Lys
Ala Ala Leu Gly Ala Val Lys Lys Leu Val Gly Ala Glu Ser
<210> 24
<211> 21
<212> PRT
<213> Misgurnus Anguillicaudatus
<400> 24
Arg Gln Arg Val Glu Glu Leu Ser Lys Phe Ser Lys Lys Gly Ala Ala
Ala Arg Arg Arg Lys
             20
<210> 25
<211> 27
<212> PRT
<213> Apis mellifera
<400> 25
Gly Ile Gly Ala Val Leu Lys Val Leu Thr Thr Gly Leu Pro Ala Leu
Ile Ser Trp Ile Ser Arg Lys Lys Arg Gln Gln
<210> 26
<211> 33
<212> PRT
<213> Pardachirus pavoninus
Gly Phe Phe Ala Leu Ile Pro Lys Ile Ile Ser Ser Pro Leu Phe Lys
Thr Leu Leu Ser Ala Val Gly Ser Ala Leu Ser Ser Ser Gly Glu Gln
Glu
<210> 27
<211> 33
<212> PRT
<213> Pardachirus pavoninus
```

Thr Leu Leu Ser Ala Val Gly Ser Ala Leu Ser Ser Ser Gly Gly Gln 20 25 30

Glu

<210> 28

<211> 176

<212> PRT

<213> Bos taurus

<400> 28

Met Glu Thr Gln Arg Ala Ser Leu Ser Leu Gly Arg Cys Ser Leu Trp 1 5 10 15

Leu Leu Leu Gly Leu Val Leu Pro Ser Ala Ser Ala Gln Ala Leu 20 25 30

Ser Tyr Arg Glu Ala Val Leu Arg Ala Val Asp Gln Phe Asn Glu Arg 35 40 45

Ser Ser Glu Ala Asn Leu Tyr Arg Leu Leu Glu Leu Asp Pro Thr Pro 50 55 60

Asn Asp Asp Leu Asp Pro Gly Thr Arg Lys Pro Val Ser Phe Arg Val 65 70 75 80

Lys Glu Thr Asp Cys Pro Arg Thr Ser Gln Gln Pro Leu Glu Gln Cys
85 90 95

Asp Phe Lys Glu Asn Gly Leu Val Lys Gln Cys Val Gly Thr Val Thr 100 105 110

Leu Asp Pro Ser Asn Asp Gln Phe Asp Ile Asn Cys Asn Glu Leu Gln
115 120 125

Ser Val Arg Phe Arg Pro Pro Ile Arg Pro Pro Ile Arg Pro Pro 130 135 140

Phe Tyr Pro Pro Phe Arg Pro Pro Ile Arg Pro Pro Ile Phe Pro Pro 145 150 155 160

Ile Arg Pro Pro Phe Arg Pro Pro Leu Gly Pro Phe Pro Gly Arg Arg 165 170 175

<210> 29

<211> 155

<212> PRT

<213> Bos taurus

Met Glu Thr Pro Arg Ala Ser Leu Ser Leu Gly Arg Trp Ser Leu Trp Leu Leu Leu Gly Leu Ala Leu Pro Ser Ala Ser Ala Gln Ala Leu Ser Tyr Arg Glu Ala Val Leu Arg Ala Val Asp Gln Leu Asn Glu Gln Ser Ser Glu Pro Asn Ile Tyr Arg Leu Leu Glu Leu Asp Gln Pro Pro Gln Asp Asp Glu Asp Pro Asp Ser Pro Lys Arg Val Ser Phe Arg Val Lys Glu Thr Val Cys Ser Arg Thr Thr Gln Gln Pro Pro Glu Gln Cys Asp Phe Lys Glu Asn Gly Leu Leu Lys Arg Cys Glu Gly Thr Val Thr 105 Leu Asp Gln Val Arg Gly Asn Phe Asp Ile Thr Cys Asn Asn His Gln Ser Ile Arg Ile Thr Lys Gln Pro Trp Ala Pro Pro Gln Ala Ala Arg 135 Leu Cys Arg Ile Val Val Ile Arg Val Cys Arg <210> 30 <211> 29 <212> PRT <213> Ceratitis capitata <400> 30 Ser Ile Gly Ser Ala Leu Lys Lys Ala Leu Pro Val Ala Lys Lys Ile Gly Lys Ile Ala Leu Pro Ile Ala Lys Ala Ala Leu Pro 25 <210> 31 <211> 29 <212> PRT <213> Ceratitis capitata <400> 31 Ser Ile Gly Ser Ala Phe Lys Lys Ala Leu Pro Val Ala Lys Lys Ile Gly Lys Ala Ala Leu Pro Ile Ala Lys Ala Ala Leu Pro <210> 32 <211> 170 <212> PRT <213> Homo sapiens

<400> 29

<400> 32 Met Lys Thr Gln Arg Asn Gly His Ser Leu Gly Arg Trp Ser Leu Val Leu Leu Leu Gly Leu Val Met Pro Leu Ala Ile Ile Ala Gln Val Leu Ser Tyr Lys Glu Ala Val Leu Arg Ala Ile Asp Gly Ile Asn Gln Arg Ser Ser Asp Ala Asn Leu Tyr Arg Leu Leu Asp Leu Asp Pro Arg 55 Pro Thr Met Asp Gly Asp Pro Asp Thr Pro Lys Pro Val Ser Phe Thr Val Lys Glu Thr Val Cys Pro Arg Thr Thr Gln Gln Ser Pro Glu Asp Cys Asp Phe Lys Lys Asp Gly Leu Val Lys Arg Cys Met Gly Thr Val 105 100 110 Thr Leu Asn Gln Ala Arg Gly Ser Phe Asp Ile Ser Cys Asp Lys Asp Asn Lys Arg Phe Ala Leu Leu Gly Asp Phe Phe Arg Lys Ser Lys Glu 135 Lys Ile Gly Lys Glu Phe Lys Arg Ile Val Gln Arg Ile Lys Asp Phe Leu Arg Asn Leu Val Pro Arg Thr Glu Ser 165 <210> 33 <211> 170 <212> PRT <213> Equus caballus Met Glu Thr Gln Arg Asn Thr Arg Cys Leu Gly Arg Trp Ser Pro Leu Leu Leu Leu Gly Leu Val Ile Pro Pro Ala Thr Thr Gln Ala Leu Ser Tyr Lys Glu Ala Val Leu Arg Ala Val Asp Gly Leu Asn Gln Arg Ser Ser Asp Glu Asn Leu Tyr Arg Leu Leu Glu Leu Asp Pro Leu Pro Lys Gly Asp Lys Asp Ser Asp Thr Pro Lys Pro Val Ser Phe Met Val Lys Glu Thr Val Cys Pro Arg Ile Met Lys Gln Thr Pro Glu Gln Cys

Asp Phe Lys Glu Asn Gly Leu Val Lys Gln Cys Val Gly Thr Val Ile

105

100

Gln Met Ile Arg Asp Lys Ser Glu Ala Thr Arg His Gly Ile Arg Ile 145 150 155 160

Ile Thr Arg Pro Lys Leu Leu Leu Ala Ser 165 170

<210> 34

<211> 159

<212> PRT

<213> Bos taurus

<400> 34

Met Glu Thr Gln Arg Ala Ser Leu Ser Leu Gly Arg Trp Ser Leu Trp

1 10 15

Leu Leu Leu Gly Leu Ala Leu Pro Ser Ala Ser Ala Gln Ala Leu 20 25 30

Ser Tyr Arg Glu Ala Val Leu Arg Ala Val Asp Gln Leu Asn Glu Lys 35 40 45

Ser Ser Glu Ala Asn Leu Tyr Arg Leu Leu Glu Leu Asp Pro Pro 50 55 60

Lys Glu Asp Asp Glu Asn Pro Asn Ile Pro Lys Pro Val Ser Phe Arg 65 70 75 80

Val Lys Glu Thr Val Cys Pro Arg Thr Ser Gln Gln Ser Pro Glu Gln 85 90 95

Cys Asp Phe Lys Glu Asn Gly Leu Leu Lys Glu Cys Val Gly Thr Val 100 105 110

Thr Leu Asp Gln Val Gly Ser Asn Phe Asp Ile Thr Cys Ala Val Pro 115 120 125

Gln Ser Val Gly Gly Leu Arg Ser Leu Gly Arg Lys Ile Leu Arg Ala 130 135 140

Trp Lys Lys Tyr Gly Pro Ile Ile Val Pro Ile Ile Arg Ile Gly 145 150 155

<210> 35

<211> 156

<212> PRT

<213> Equus asinus

<400> 35 Met Glu Thr Gln Arg Asn Thr Arg Cys Leu Gly Arg Trp Ser Pro Leu Leu Leu Leu Gly Leu Val Ile Pro Pro Ala Thr Thr Gln Ala Leu Ser Tyr Lys Glu Ala Val Leu Arg Ala Val Asp Gly Leu Asn Gln Arg Ser Ser Asp Glu Asn Leu Tyr Arg Leu Leu Glu Leu Asp Pro Leu Pro Lys Gly Asp Lys Asp Ser Asp Thr Pro Lys Pro Val Ser Phe Met Val Lys Glu Thr Val Cys Pro Arg Ile Met Lys Gln Thr Pro Glu Gln Cys Asp Phe Lys Glu Asn Gly Leu Val Lys Gln Cys Val Gly Thr Val Ile 105 Leu Gly Pro Val Lys Asp His Phe Asp Val Ser Cys Gly Glu Pro Gln Arg Val Lys Arg Phe Gly Arg Leu Ala Lys Ser Phe Leu Arg Met Arg Ile Leu Leu Pro Arg Arg Lys Ile Leu Leu Ala Ser 150 <210> 36 <211> 160 <212> PRT <213> Ovis aries <400> 36 Met Glu Thr Gln Arg Ala Ser Leu Ser Leu Gly Arg Cys Ser Leu Trp Leu Leu Leu Gly Leu Ala Leu Pro Ser Ala Ser Ala Gln Val Leu Ser Tyr Arg Glu Ala Val Leu Arg Ala Ala Asp Gln Leu Asn Glu Lys Ser Ser Glu Ala Asn Leu Tyr Arg Leu Leu Glu Leu Asp Pro Pro Pro Lys Gln Asp Asp Glu Asn Ser Asn Ile Pro Lys Pro Val Ser Phe Arg Val Lys Glu Thr Val Cys Pro Arg Thr Ser Gln Gln Pro Ala Glu Gln Cys Asp Phe Lys Glu Asn Gly Leu Leu Lys Glu Cys Val Gly Thr Val

105

Thr Leu Asp Gln Val Arg Asn Asn Phe Asp Ile Thr Cys Ala Glu Pro 115 120 125

```
Gln Ser Val Arg Gly Leu Arg Arg Leu Gly Arg Lys Ile Ala His Gly
Val Lys Lys Tyr Gly Pro Thr Val Leu Arg Ile Ile Arg Ile Ala Gly
                                         155
                    150
<210> 37
<211> 12
<212> PRT
<213> Bos taurus
<400> 37
Arg Leu Cys Arg Ile Val Val Ile Arg Val Cys Arg
<210> 38
<211> 30
<212> PRT
<213> Homo sapiens
<400> 38
Ala Cys Tyr Cys Arg Ile Pro Ala Cys Ile Ala Gly Glu Arg Arg Tyr
Gly Thr Cys Ile Tyr Gln Gly Arg Leu Trp Ala Phe Cys Cys
<210> 39
<211> 29
<212> PRT
<213> Homo sapiens
<400> 39
Cys Tyr Cys Arg Ile Pro Ala Cys Ile Ala Gly Glu Arg Arg Tyr Gly
Thr Cys Ile Tyr Gln Gly Arg Leu Trp Ala Phe Cys Cys
             20
                                 25
<210> 40
<211> 30
<212> PRT
<213> Homo sapiens
<400> 40
Asp Cys Tyr Cys Arg Ile Pro Ala Cys Ile Ala Gly Glu Arg Arg Tyr
Gly Thr Cys Ile Tyr Gln Gly Arg Leu Trp Ala Phe Cys Cys
<210> 41
<211> 33
<212> PRT
<213> Homo sapiens
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```
Val Cys Ser Cys Arg Leu Val Phe Cys Arg Arg Thr Glu Leu Arg Val
Gly Asn Cys Leu Ile Gly Gly Val Ser Phe Thr Tyr Cys Cys Thr Arg
Val
<210> 42
<211> 33
<212> PRT
<213> Oryctolagus cuniculus
<400> 42
Val Val Cys Ala Cys Arg Arg Ala Leu Cys Leu Pro Arg Glu Arg Arg
Ala Gly Phe Cys Arg Ile Arg Gly Arg Ile His Pro Leu Cys Cys Arg 20 25 30
Arg
<210> 43
<211> 33
<212> PRT
<213> Oryctolagus cuniculus
<400> 43
Val Val Cys Ala Cys Arg Arg Ala Leu Cys Leu Pro Leu Glu Arg Arg
Ala Gly Phe Cys Arg Ile Arg Gly Arg Ile His Pro Leu Cys Cys Arg
Arg
<210> 44
<211> 34
<212> PRT
<213> Oryctolagus cuniculus
<400> 44
Gly Ile Cys Ala Cys Arg Arg Phe Cys Pro Asn Ser Glu Arg Phe
Ser Gly Tyr Cys Arg Val Asn Gly Ala Arg Tyr Val Arg Cys Cys Ser
                                  25
Arg Arg
<210> 45
<211> 34
<212> PRT
<213> Oryctolagus cuniculus
```

<400> 45 Gly Arg Cys Val Cys Arg Lys Gln Leu Leu Cys Ser Tyr Arg Glu Arg Arg Ile Gly Asp Cys Lys Ile Arg Gly Val Arg Phe Pro Phe Cys Cys Pro Arg <210> 46 <211> 34 <212> PRT <213> Oryctolagus cuniculus <400> 46 Val Ser Cys Thr Cys Arg Arg Phe Ser Cys Gly Phe Gly Glu Arg Ala Ser Gly Ser Cys Thr Val Asn Gly Gly Val Arg His Thr Leu Cys Cys 25 Arg Arg <210> 47 <211> 33 <212> PRT <213> Oryctolagus cuniculus <400> 47 Val Phe Cys Thr Cys Arg Gly Phe Leu Cys Gly Ser Gly Glu Arg Ala Ser Gly Ser Cys Thr Ile Asn Gly Val Arg His Thr Leu Cys Cys Arg Arg <210> 48 <211> 32 <212> PRT <213> Rattus norvegicus <400> 48 Val Thr Cys Tyr Cys Arg Arg Thr Arg Cys Gly Phe Arg Glu Arg Leu Ser Gly Ala Cys Gly Tyr Arg Gly Arg Ile Tyr Arg Leu Cys Cys Arg <210> 49 <211> 30 <212> PRT <213> Rattus norvegicus

```
<400> 49
Cys Ser Cys Arg Tyr Ser Ser Cys Arg Phe Gly Glu Arg Leu Leu Ser
Gly Ala Cys Arg Leu Asn Gly Arg Ile Tyr Arg Leu Cys Cys
<210> 50
<211> 31
<212> PRT
<213> Rattus norvegicus
<400> 50
Ala Cys Thr Cys Arg Ile Gly Ala Cys Val Ser Gly Glu Arg Leu Thr
Gly Ala Cys Gly Leu Asn Gly Arg Ile Tyr Arg Leu Cys Cys Arg
<210> 51
<211> 31
<212> PRT
<213> Guinea pig cytomegalovirus
<400> 51
Arg Arg Cys Ile Cys Thr Thr Arg Thr Cys Arg Phe Pro Tyr Arg Arg
Leu Gly Thr Cys Ile Phe Gln Asn Arg Val Tyr Thr Phe Cys Cys
<210> 52
<211> 67
<212> PRT
<213> Homo sapiens
<400> 52
Met Arg Ile His Tyr Leu Leu Phe Ala Leu Leu Phe Leu Phe Leu Val
Pro Val Pro Gly His Gly Gly Ile Ile Asn Thr Leu Gln Lys Tyr Tyr
                                 25
                                                      30
Cys Arg Val Arg Gly Gly Arg Cys Ala Val Leu Ser Cys Leu Pro Lys
                             40
Glu Glu Gln Ile Gly Lys Cys Ser Thr Arg Gly Arg Lys Cys Cys Arg
Arg Lys Lys
65
<210> 53
<211> 18
<212> PRT
<213> Macaca mulatta
<400> 53
Arg Cys Ile Cys Thr Arg Gly Phe Cys Arg Cys Leu Cys Arg Arg Gly
                  5
                                     10
                                                          15
```

Val Cys

```
<210> 54
<211> 78
<212> PRT
<213> Helianthus annuus
<400> 54
Met Lys Ser Ser Met Lys Met Phe Ala Ala Leu Leu Val Val Met
Cys Leu Leu Ala Asn Glu Met Gly Gly Pro Leu Val Val Glu Ala Arg
Thr Cys Glu Ser Gln Ser His Lys Phe Lys Gly Thr Cys Leu Ser Asp
Thr Asn Cys Ala Asn Val Cys His Ser Glu Arg Phe Ser Gly Gly Lys
Cys Arg Gly Phe Arg Arg Cys Phe Cys Thr Thr His Cys
<210> 55
<211> 78
<212> PRT
<213> Helianthus annuus
<400> 55
Met Lys Ser Ser Met Lys Met Phe Ala Ala Leu Leu Leu Val Val Met
Cys Leu Leu Ala Asn Glu Met Gly Gly Pro Leu Val Val Glu Ala Arg
20 25 30
Thr Cys Glu Ser Gln Ser His Lys Phe Lys Gly Thr Cys Leu Ser Asp
Thr Asn Cys Ala Asn Val Cys His Ser Glu Arg Phe Ser Gly Gly Lys
Cys Arg Gly Phe Arg Arg Cys Phe Cys Thr Thr His Cys
<210> 56
<211> 30
<212> PRT
<213> Macaca mulatta
<400> 56
Ala Cys Tyr Cys Arg Ile Pro Ala Cys Leu Ala Gly Glu Arg Arg Tyr
Gly Thr Cys Phe Tyr Met Gly Arg Val Trp Ala Phe Cys Cys
```

<210> 57

<211> 37

<212> PRT

<213> Androctonus Australis Hector

```
<400> 57
Gly Phe Gly Cys Pro Phe Asn Gln Gly Ala Cys His Arg His Cys Arg
Ser Ile Arg Arg Arg Gly Gly Tyr Cys Ala Gly Leu Phe Lys Gln Thr
Cys Thr Cys Tyr Arg
<210> 58
<211> 38
<212> PRT
<213> Mytilus galloprovincialis
<220>
<221> SITE
<222> (28)
<223> Xaa at this position can be any amino acid.
<400> 58
Gly Phe Gly Cys Pro Asn Asn Tyr Gln Cys His Arg His Cys Lys Ser
Ile Pro Gly Arg Cys Gly Gly Tyr Cys Gly Gly Xaa His Arg Leu Arg 20 25 30
Cys Thr Cys Tyr Arg Cys
<210> 59
<211> 54
<212> PRT
<213> Heuchera sanguinea
<400> 59
Asp Gly Val Lys Leu Cys Asp Val Pro Ser Gly Thr Trp Ser Gly His
Cys Gly Ser Ser Lys Cys Ser Gln Gln Cys Lys Asp Arg Glu His
Phe Ala Tyr Gly Gly Ala Cys His Tyr Gln Phe Pro Ser Val Lys Cys
Phe Cys Lys Arg Gln Cys
    50
<210> 60
<211> 49
<212> PRT
<213> Clitoria ternatea
```

<400> 60 Asn Leu Cys Glu Arg Ala Ser Leu Thr Trp Thr Gly Asn Cys Gly Asn Thr Gly His Cys Asp Thr Gln Cys Arg Asn Trp Glu Ser Ala Lys His Gly Ala Cys His Lys Arg Gly Asn Trp Lys Cys Phe Cys Tyr Phe Asn Cys <210> 61 <211> 91 <212> PRT <213> Mus musculus <400> 61 Met Lys Lys Leu Val Leu Leu Phe Ala Leu Val Leu Ala Phe Gln Val Gln Ala Asp Ser Ile Gln Asn Thr Asp Glu Glu Thr Lys Thr Glu Glu Gln Pro Gly Glu Lys Asp Gln Ala Val Ser Val Ser Phe Gly Asp Pro Gln Gly Ser Ala Leu Gln Asp Ala Ala Leu Gly Trp Gly Arg Arg Cys Pro Gln Cys Pro Arg Cys Pro Ser Cys Pro Ser Cys Pro Arg Cys Pro Arg Cys Pro Arg Cys Lys Cys Asn Pro Lys <210> 62 <211> 40 <212> PRT <213> Bos taurus <400> 62 Gln Gly Val Arg Asn Phe Val Thr Cys Arg Ile Asn Arg Gly Phe Cys Val Pro Ile Arg Cys Pro Gly His Arg Arg Gln Ile Gly Thr Cys Leu Gly Pro Gln Ile Lys Cys Cys Arg <210> 63 <211> 40 <212> PRT <213> Bos taurus

<400> 63 Gln Gly Val Arg Asn Phe Val Thr Cys Arg Ile Asn Arg Gly Phe Cys Val Pro Ile Arg Cys Pro Gly His Arg Arg Gln Ile Gly Thr Cys Leu Gly Pro Arg Ile Lys Cys Cys Arg <210> 64 <211> 42 <212> PRT <213> Bos taurus <400> 64 Gln Gly Val Arg Asn His Val Thr Cys Arg Ile Tyr Gly Gly Phe Cys Val Pro Ile Arg Cys Pro Gly Arg Thr Arg Gln Ile Gly Thr Cys Phe 20 25 Gly Arg Pro Val Lys Cys Cys Arg Arg Trp <210> 65 <211> 40 <212> PRT <213> Bos taurus <400> 65 Gln Val Val Arg Asn Pro Gln Ser Cys Arg Trp Asn Met Gly Val Cys Ile Pro Ile Ser Cys Pro Gly Asn Met Arg Gln Ile Gly Thr Cys Phe Gly Pro Arg Val Pro Cys Cys Arg <210> 66 <211> 41 <212> PRT <213> Bos taurus <400> 66 Gln Arg Val Arg Asn Pro Gln Ser Cys Arg Trp Asn Met Gly Val Cys Ile Pro Phe Leu Cys Arg Val Gly Met Arg Gln Ile Gly Thr Cys Phe 20 Gly Pro Arg Val Pro Cys Cys Arg Arg <210> 67 <211> 42 <212> PRT <213> Bos taurus

<400> 67 Gln Gly Val Arg Asn His Val Thr Cys Arg Ile Asn Arg Gly Phe Cys Val Pro Ile Arg Cys Pro Gly Arg Thr Arg Gln Ile Gly Thr Cys Phe Gly Pro Arg Ile Lys Cys Cys Arg Ser Trp <210> 68 <211> 40 <212> PRT <213> Bos taurus <400> 68 Gln Gly Val Arg Ser Tyr Leu Ser Cys Trp Gly Asn Arg Gly Ile Cys Leu Leu Asn Arg Cys Pro Gly Arg Met Arg Gln Ile Gly Thr Cys Leu 20 25 Ala Pro Arg Val Lys Cys Cys Arg <210> 69 <211> 42 <212> PRT <213> Bos taurus <400> 69 Ser Gly Ile Ser Gly Pro Leu Ser Cys Gly Arg Asn Gly Gly Val Cys Ile Pro Ile Arg Cys Pro Val Pro Met Arg Gln Ile Gly Thr Cys Phe Gly Arg Pro Val Lys Cys Cys Arg Ser Trp <210> 70 <211> 38 <212> PRT <213> Bos taurus <400> 70 Asp Phe Ala Ser Cys His Thr Asn Gly Gly Ile Cys Leu Pro Asn Arg Cys Pro Gly His Met Ile Gln Ile Gly Ile Cys Phe Arg Pro Arg Val Lys Cys Cys Arg Ser Trp <210> 71 <211> 74 <212> PRT <213> Zophobas atratus

```
Ser Leu Gln Gly Gly Ala Pro Asn Phe Pro Gln Pro Ser Gln Gln Asn
Gly Gly Trp Gln Val Ser Pro Asp Leu Gly Arg Asp Asp Lys Gly Asn
Thr Arg Gly Gln Ile Glu Ile Gln Asn Lys Gly Lys Asp His Asp Phe
Asn Ala Gly Trp Gly Lys Val Ile Arg Gly Pro Asn Lys Ala Lys Pro
Thr Trp His Val Gly Gly Thr Tyr Arg Arg
<210> 72
<211> 67
<212> PRT
<213> Homo sapiens
Met Arg Ile His Tyr Leu Leu Phe Ala Leu Leu Phe Leu Phe Leu Val
Pro Val Pro Gly His Gly Gly Ile Ile Asn Thr Leu Gln Lys Tyr Tyr
Cys Arg Val Arg Gly Gly Arg Cys Ala Val Leu Ser Cys Leu Pro Lys
Glu Glu Gln Ile Gly Lys Cys Ser Thr Arg Gly Arg Lys Cys Cys Arg
Arg Lys Lys
65
<210> 73
<211> 40
<212> PRT
<213> Aedes aegypti
Ala Thr Cys Asp Leu Leu Ser Gly Phe Gly Val Gly Asp Ser Ala Cys
Ala Ala His Cys Ile Ala Arg Gly Asn Arg Gly Gly Tyr Cys Asn Ser
Lys Lys Val Cys Val Cys Arg Asn
<210> 74
<211> 35
<212> PRT
<213> Mytilus edulis
<220>
<221> SITE
<222> (28)
<223> Xaa at this position can be any amino acid.
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<400> 74
Gly Phe Gly Cys Pro Asn Asp Tyr Pro Cys His Arg His Cys Lys Ser
Ile Pro Gly Arg Tyr Gly Gly Tyr Cys Gly Gly Xaa His Arg Leu Arg 20 25 30
Cys Thr Cys
<210> 75
<211> 40
<212> PRT
<213> Sarcophaga peregrina
<400> 75
Ala Thr Cys Asp Leu Leu Ser Gly Ile Gly Val Gln His Ser Ala Cys
Ala Leu His Cys Val Phe Arg Gly Asn Arg Gly Gly Tŷr Cys Thr Gly
                                                      30
Lys Gly Ile Cys Val Cys Arg Asn
<210> 76
<211> 95
<212> PRT
<213> Oryctolagus cuniculus
<400> 76
Met Arg Thr Leu Ala Leu Leu Ala Ala Ile Leu Leu Val Ala Leu Gln
Ala Gln Ala Glu His Val Ser Val Ser Ile Asp Glu Val Val Asp Gln
Gln Pro Pro Gln Ala Glu Asp Gln Asp Val Ala Ile Tyr Val Lys Glu
His Glu Ser Ser Ala Leu Glu Ala Leu Gly Val Lys Ala Gly Val Val
     50
                         55
Cys Ala Cys Arg Arg Ala Leu Cys Leu Pro Arg Glu Arg Arg Ala Gly
Phe Cys Arg Ile Arg Gly Arg Ile His Pro Leu Cys Cys Arg Arg
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<210> 77 <211> 92

<212> PRT

<213> Mus musculus

<400> 77 Met Lys Pro Leu Val Leu Leu Ser Ala Leu Val Leu Leu Ser Phe Gln Val Gln Ala Asp Pro Ile Gln Asn Thr Asp Glu Glu Thr Lys Thr Glu Glu Gln Ser Gly Glu Glu Asp Gln Ala Val Ser Val Ser Phe Gly Asp Arg Glu Gly Ala Ser Leu Gln Glu Glu Ser Leu Arg Asp Leu Val Cys Tyr Cys Arg Thr Arg Gly Cys Lys Arg Arg Glu Arg Met Asn Gly Thr Cys Arg Lys Gly His Leu Met Tyr Thr Leu Cys Cys 85 <210> 78 <211> 93 <212> PRT <213> Mus musculus <400> 78 Met Lys Thr Phe Val Leu Leu Ser Ala Leu Val Leu Leu Ala Phe Gln Val Gln Ala Asp Pro Ile His Lys Thr Asp Glu Glu Thr Asn Thr Glu 25 Glu Gln Pro Gly Glu Glu Asp Gln Ala Val Ser Ile Ser Phe Gly Gly Gln Glu Gly Ser Ala Leu His Glu Glu Leu Ser Lys Lys Leu Ile Cys Tyr Cys Arg Ile Arg Gly Cys Lys Arg Arg Glu Arg Val Phe Gly Thr Cys Arg Asn Leu Phe Leu Thr Phe Val Phe Cys Cys Ser 85 <210> 79 <211> 35 <212> PRT <213> Mus musculus <400> 79 Leu Arg Asp Leu Val Cys Tyr Cys Arg Ala Arg Gly Cys Lys Gly Arg Glu Arg Met Asn Gly Thr Cys Arg Lys Gly His Leu Leu Tyr Met Leu Cys Cys Arg <210> 80 <211> 43

<212> PRT

<213> Pyrrhocoris apterus

<400> 80 Ala Thr Cys Asp Ile Leu Ser Phe Gln Ser Gln Trp Val Thr Pro Asn His Ala Gly Cys Ala Leu His Cys Val Ile Lys Gly Tyr Lys Gly Gly 20 25 30Gln Cys Lys Ile Thr Val Cys His Cys Arg Arg <210> 81 <211> 32 <212> PRT <213> Rattus norvegicus <400> 81 Val Thr Cys Tyr Cys Arg Ser Thr Arg Cys Gly Phe Arg Glu Arg Leu Ser Gly Ala Cys Gly Tyr Arg Gly Arg Ile Tyr Arg Leu Cys Cys Arg 20  $\phantom{0}$  25  $\phantom{0}$  30 <210> 82 <211> 31 <212> PRT <213> Rattus norvegicus <400> 82 Val Thr Cys Ser Cys Arg Thr Ser Ser Cys Arg Phe Gly Glu Arg Leu Ser Gly Ala Cys Arg Leu Asn Gly Arg Ile Tyr Arg Leu Cys Cys <210> 83 <211> 34 <212> PRT <213> Oryctolagus cuniculus <400> 83 Gly Ile Cys Ala Cys Arg Arg Phe Cys Leu Asn Phe Glu Gln Phe Ser Gly Tyr Cys Arg Val Asn Gly Ala Arg Tyr Val Arg Cys Cys Ser Arg Arg <210> 84 <211> 64 <212> PRT <213> Pan troglodytes <400> 84 Met Arg Val Leu Tyr Leu Leu Phe Ser Phe Leu Phe Ile Phe Leu Met Pro Leu Pro Gly Val Phe Gly Gly Ile Ser Asp Pro Val Thr Cys Leu

Lys Ser Gly Ala Ile Cys His Pro Val Phe Cys Pro Arg Arg Tyr Lys 35 40 45

Gln Ile Gly Thr Cys Gly Leu Pro Gly Thr Lys Cys Cys Lys Lys Pro 50 55 60

<210> 85

<211> 64

<212> PRT

<213> Homo sapiens

<400> 85

Met Arg Val Leu Tyr Leu Leu Phe Ser Phe Leu Phe Ile Phe Leu Met

1 10 15

Pro Leu Pro Gly Val Phe Gly Gly Ile Gly Asp Pro Val Thr Cys Leu 20 25 30

Lys Ser Gly Ala Ile Cys His Pro Val Phe Cys Pro Arg Arg Tyr Lys
35 40 45

Gln Ile Gly Thr Cys Gly Leu Pro Gly Thr Lys Cys Cys Lys Lys Pro
50 55 60

<210> 86

<211> 68

<212> PRT

<213> Homo sapiens

<400> 86

Met Arg Thr Ser Tyr Leu Leu Leu Phe Thr Leu Cys Leu Leu Ser 1 5 10 15

Glu Met Ala Ser Gly Gly Asn Phe Leu Thr Gly Leu Gly His Arg Ser 20 25 30

Asp His Tyr Asn Cys Val Ser Ser Gly Gly Gln Cys Leu Tyr Ser Ala 35 40 45

Cys Pro Ile Phe Thr Lys Ile Gln Gly Thr Cys Tyr Arg Gly Lys Ala 50 60

Lys Cys Cys Lys

<210> 87

<211> 64

<212> PRT

<213> Capra hircus

<400> 87

Met Arg Leu His His Leu Leu Leu Val Leu Phe Phe Leu Val Leu Ser 1 5 10 15

Ala Gly Ser Gly Phe Thr Gln Gly Ile Arg Ser Arg Arg Ser Cys His
20 25 30

Arg Asn Lys Gly Val Cys Ala Leu Thr Arg Cys Pro Arg Asn Met Arg 35 40 45

Gln Ile Gly Thr Cys Phe Gly Pro Pro Val Lys Cys Cys Arg Lys Lys 50 60

<210> 88

<211> 64

<212> PRT

<213> Capra hircus

<400> 88

Met Arg Leu His His Leu Leu Leu Ala Leu Phe Phe Leu Val Leu Ser

1 5 10 15

Ala Gly Ser Gly Phe Thr Gln Gly Ile Ile Asn His Arg Ser Cys Tyr
20 25 30

Arg Asn Lys Gly Val Cys Ala Pro Ala Arg Cys Pro Arg Asn Met Arg
35 40 45

Gln Ile Gly Thr Cys His Gly Pro Pro Val Lys Cys Cys Arg Lys Lys
50 60

<210> 89

<211> 96

<212> PRT

<213> Macaca mulatta

<400> 89

Met Arg Thr Leu Val Ile Leu Ala Ala Ile Leu Leu Val Ala Leu Gln
1 5 10 15

Ala Gln Ala Glu Pro Leu Gln Ala Arg Thr Asp Glu Ala Thr Ala Ala 20 25 30

Gln Glu Gln Ile Pro Thr Asp Asn Pro Glu Val Val Val Ser Leu Ala 35 40 45

Trp Asp Glu Ser Leu Ala Pro Lys Asp Ser Val Pro Gly Leu Arg Lys
50 55 60

Asn Met Ala Cys Tyr Cys Arg Ile Pro Ala Cys Leu Ala Gly Glu Arg 65 70 75 80

Arg Tyr Gly Thr Cys Phe Tyr Arg Arg Val Trp Ala Phe Cys Cys
85 90 95

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<210> 90
<211> 96
<212> PRT
<213> Macaca mulatta
<400> 90
Met Arg Thr Leu Val Ile Leu Ala Ala Ile Leu Leu Val Ala Leu Gln
Ala Gln Ala Glu Pro Leu Gln Ala Arg Thr Asp Glu Ala Thr Ala Ala
Gln Glu Gln Ile Pro Thr Asp Asn Pro Glu Val Val Ser Leu Ala
Trp Asp Glu Ser Leu Ala Pro Lys Asp Ser Val Pro Gly Leu Arg Lys
Asn Met Ala Cys Tyr Cys Arg Ile Pro Ala Cys Leu Ala Gly Glu Arg
Arg Tyr Gly Thr Cys Phe Tyr Leu Gly Arg Val Trp Ala Phe Cys Cys
<210> 91
<211> 33
<212> PRT
<213> Mesocricetus auratus
<400> 91
Val Thr Cys Phe Cys Arg Arg Gly Cys Ala Ser Arg Glu Arg His
Ile Gly Tyr Cys Arg Phe Gly Asn Thr Ile Tyr Arg Leu Cys Cys Arg
Arg
<210> 92
<211> 31
<212> PRT
<213> Mesocricetus auratus
<400> 92
Cys Phe Cys Lys Arg Pro Val Cys Asp Ser Gly Glu Thr Gln Ile Gly
Tyr Cys Arg Leu Gly Asn Thr Phe Tyr Arg Leu Cys Cys Arg Gln 20 25 30
<210> 93
<211> 39
<212> PRT
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<213> Gallus gallus

<400> 93 Gly Arg Lys Ser Asp Cys Phe Arg Lys Asn Gly Phe Cys Ala Phe Leu Lys Cys Pro Tyr Leu Thr Leu Ile Ser Gly Lys Cys Ser Arg Phe His Leu Cys Cys Lys Arg Ile Trp <210> 94 <211> 43 <212> PRT <213> Allomyrina dichotoma <400> 94 Val Thr Cys Asp Leu Leu Ser Phe Glu Ala Lys Gly Phe Ala Ala Asn His Ser Leu Cys Ala Ala His Cys Leu Ala Ile Gly Arg Arg Gly Gly 20 25 Ser Cys Glu Arg Gly Val Cys Ile Cys Arg Arg <210> 95 <211> 31 <212> PRT <213> Cavia porcellus <400> 95 Arg Arg Cys Ile Cys Thr Thr Arg Thr Cys Arg Phe Pro Tyr Arg Arg Leu Gly Thr Cys Ile Phe Gln Asn Arg Val Tyr Thr Phe Cys Cys <210> 96 <211> 18 <212> PRT <213> Artificial Sequence: <223> Description of Artificial Sequence: Synthetic <220> <221> UNSURE <222> (1) <223> Represents conservatively or nonconservatively substituted amino acid. <220> <221> UNSURE <222> (3) <223> Represents conservatively or nonconservatively substituted amino acid. <220> <221> UNSURE <222> (6) <223> Represents conservatively or nonconservatively substituted amino acid.

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<220>
<221> UNSURE
<222> (8)
<223> Represents conservatively or nonconservatively
      substituted amino acid.
<220>
<221> UNSURE
<222> (11)
<223> Represents conservatively or nonconservatively
      substituted amino acid.
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<222> (13)
<223> Represents conservatively or nonconservatively
      substituted amino acid.
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<222> (15)
<223> Represents conservatively or nonconservatively
      substituted amino acid.
<220>
<221> UNSURE
<222> (18)
<223> Represents conservatively or nonconservatively
      substituted amino acid.
<220>
<221> SITE
<222> (1)
<223> Xaa at this position can be any amino acid.
<220>
<221> SITE
<222> (18)
<223> Xaa at this position can be any amino acid.
Xaa Cys Asn Cys Arg Asn Cys Asn Glu Arg Asn Cys Asn Gly Asn Cys
Cys Xaa
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